

|   |                        |   |
|---|------------------------|---|
| <b>UTILITY<br/>PATENT APPLICATION<br/>TRANSMITTAL</b><br><br><i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i> | Attorney Docket No.    | EPA 679-03  |
|   | First Inventor         | Charles L. Gray, Jr.  |
|   | Title                  | Low Emission Diesel Combustion System with Low Charge-Air Oxygen Concentration Levels and High Fuel Injection Pressures |
|   | Express Mail Label No. |   |

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|--|---|
| <b>APPLICATION ELEMENTS</b><br><i>See MPEP chapter 600 concerning utility patent application contents.</i> | <b>ADDRESS TO:</b><br>Mail Stop Patent Application<br>Commissioner for Patents<br>P.O. Box 1450<br>Alexandria VA 22313-1450 |
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|--|--|
| 1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17)<br><i>(Submit an original and a duplicate for fee processing)</i><br>2. <input type="checkbox"/> Applicant claims small entity status.<br><i>See 37 CFR 1.27.</i><br>3. <input checked="" type="checkbox"/> Specification <i>[Total Pages 43]</i><br><i>(preferred arrangement set forth below)</i><br>- Descriptive title of the invention<br>- Cross Reference to Related Applications<br>- Statement Regarding Fed sponsored R & D<br>- Reference to sequence listing, a table, or a computer program listing appendix<br>- Background of the Invention<br>- Brief Summary of the Invention<br>- Brief Description of the Drawings (if filed)<br>- Detailed Description<br>- Claim(s)<br>- Abstract of the Disclosure<br>4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) <i>[Total Sheets 8]</i><br>5. Oath or Declaration <i>[Total Sheets 2]</i><br>a. <input checked="" type="checkbox"/> Newly executed (original or copy)<br>b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d))<br><i>(for continuation/divisional with Box 18 completed)</i><br>i. <input type="checkbox"/> <b>DELETION OF INVENTOR(S)</b><br>Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).<br>6. <input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76 | 7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)<br>8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)<br>a. <input type="checkbox"/> Computer Readable Form (CRF)<br>b. Specification Sequence Listing on:<br>i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or<br>ii. <input type="checkbox"/> Paper<br>c. <input type="checkbox"/> Statements verifying identity of above copies |
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**ACCOMPANYING APPLICATION PARTS**

9. ☐ Assignment Papers (cover sheet & document(s))  
 10. ☐ 37 CFR 3.73(b) Statement ☒ Power of Attorney  
*(when there is an assignee)*  
 11. ☐ English Translation Document (if applicable)  
 12. ☐ Information Disclosure ☐ Copies of IDS Citations  
 13. ☐ Statement (IDS)/PTO-1449  
 14. ☐ Preliminary Amendment  
 15. ☐ Return Receipt Postcard (MPEP 503)  
*(Should be specifically itemized)*  
 16. ☐ Certified Copy of Priority Document(s)  
*(if foreign priority is claimed)*  
 17. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.  
 18. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application No.: 10/241,229

Prior application information: Examiner Trieu, Thai Ba Art Unit: 3748  
 For CONTINUATION OF DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

|   |   |
|---|---|
| <input type="checkbox"/> Customer Number: _____ | OR <input checked="" type="checkbox"/> Correspondence address below |
| Name  | David H. Read   |
| Address   | 2565 Plymouth Road  |
| City  | Ann Arbor   |
| State   | Michigan  |
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| Telephone                                       | (734) 214-4367  |
| Fax   | (734) 214-4573  |
| Name (Print/Type)                               | David H. Read   |
| Registration No. (Attorney/Agent)               | 47,888  |
| Signature                                       | David Read  |
| Date  | Sept. 18, 2003  |

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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PTO  
10/666678  
09/19/03

09/19/03



16623 U.S. PTO

PTO/SB/17 (08-03)

Approved for use through 07/31/2006. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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# FEE TRANSMITTAL

## for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

### C mplete if Known

|                      |                      |
|----------------------|----------------------|
| Application Number   |                      |
| Filing Date          |                      |
| First Named Inventor | Charles L. Gray, Jr. |
| Examiner Name        |                      |
| Art Unit             |                      |
| Attorney Docket No.  | EPA-679-03           |

### METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number: 051128

Deposit Account Name: U.S. Environmental Protection Agency

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

### FEE CALCULATION

#### 1. BASIC FILING FEE

| Large Entity |          | Small Entity |          | Fee Description        | Fee Paid |
|--------------|----------|--------------|----------|------------------------|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |                        |          |
| 1001         | 750      | 2001         | 375      | Utility filing fee     | 750      |
| 1002         | 330      | 2002         | 165      | Design filing fee      |          |
| 1003         | 520      | 2003         | 260      | Plant filing fee       |          |
| 1004         | 750      | 2004         | 375      | Reissue filing fee     |          |
| 1005         | 160      | 2005         | 80       | Provisional filing fee |          |
| SUBTOTAL (1) |          |              |          |                        | (\$ 750) |

#### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims: 55 -20\*\* = 35 X 18 = 630

Independent Claims: 5 -3\*\* = 2 X 84 = 168

Multiple Dependent: ☐ = ☐

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 1202         | 18       | 2202         | 9        | Claims in excess of 20                                     |          |
| 1201         | 84       | 2201         | 42       | Independent claims in excess of 3                          |          |
| 1203         | 280      | 2203         | 140      | Multiple dependent claim, if not paid                      |          |
| 1204         | 84       | 2204         | 42       | ** Reissue independent claims over original patent         |          |
| 1205         | 18       | 2205         | 9        | ** Reissue claims in excess of 20 and over original patent |          |
| SUBTOTAL (2) |          |              |          |  | (\$ 798) |

\*\*or number previously paid, if greater; For Reissues, see above

### FEE CALCULATION (continued)

#### 3. ADDITIONAL FEES

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 1051         | 130      | 2051         | 65       | Surcharge - late filing fee or oath  |          |
| 1052         | 50       | 2052         | 25       | Surcharge - late provisional filing fee or cover sheet                     |          |
| 1053         | 130      | 1053         | 130      | Non-English specification  |          |
| 1812         | 2,520    | 1812         | 2,520    | For filing a request for <i>ex parte</i> reexamination                     |          |
| 1804         | 920*     | 1804         | 920*     | Requesting publication of SIR prior to Examiner action                     |          |
| 1805         | 1,840*   | 1805         | 1,840*   | Requesting publication of SIR after Examiner action                        |          |
| 1251         | 110      | 2251         | 55       | Extension for reply within first month                                     |          |
| 1252         | 410      | 2252         | 205      | Extension for reply within second month                                    |          |
| 1253         | 930      | 2253         | 465      | Extension for reply within third month                                     |          |
| 1254         | 1,450    | 2254         | 725      | Extension for reply within fourth month                                    |          |
| 1255         | 1,970    | 2255         | 985      | Extension for reply within fifth month                                     |          |
| 1401         | 320      | 2401         | 160      | Notice of Appeal   |          |
| 1402         | 320      | 2402         | 160      | Filing a brief in support of an appeal                                     |          |
| 1403         | 280      | 2403         | 140      | Request for oral hearing   |          |
| 1451         | 1,510    | 1451         | 1,510    | Petition to institute a public use proceeding                              |          |
| 1452         | 110      | 2452         | 55       | Petition to revive - unavoidable   |          |
| 1453         | 1,300    | 2453         | 650      | Petition to revive - unintentional   |          |
| 1501         | 1,300    | 2501         | 650      | Utility issue fee (or reissue)   |          |
| 1502         | 470      | 2502         | 235      | Design issue fee   |          |
| 1503         | 630      | 2503         | 315      | Plant issue fee  |          |
| 1460         | 130      | 1460         | 130      | Petitions to the Commissioner  |          |
| 1807         | 50       | 1807         | 50       | Processing fee under 37 CFR 1.17(q)  |          |
| 1806         | 180      | 1806         | 180      | Submission of Information Disclosure Stmt                                  |          |
| 8021         | 40       | 8021         | 40       | Recording each patent assignment per property (times number of properties) |          |
| 1809         | 750      | 2809         | 375      | Filing a submission after final rejection (37 CFR 1.129(a))                |          |
| 1810         | 750      | 2810         | 375      | For each additional invention to be examined (37 CFR 1.129(b))             |          |
| 1801         | 750      | 2801         | 375      | Request for Continued Examination (RCE)                                    |          |
| 1802         | 900      | 1802         | 900      | Request for expedited examination of a design application                  |          |

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

### SUBMITTED BY

|                   |               |                                   |                |           |                |
|-------------------|---------------|-----------------------------------|----------------|-----------|----------------|
| Name (Print/Type) | David H. Read | Registration No. (Attorney/Agent) | 47,888         | Telephone | (734) 214-4367 |
| Signature         | David Read    | Date                              | Sept. 18, 2003 |           |                |

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Date of Deposit: September 19, 2003

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Mail Stop Patent Application

Alexandria, VA

David H. Read

22313-1450

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